Title (en)
Fuel injector having algorithm controlled look-ahead timing for injector-ignition operation

Title (de)
Einspritzventil mit algorithmusgesteuerter Look-Head-Taktung für Einspritzzündungsbetrieb

Title (fr)
Injecteur de carburant à synchronisation à lecture anticipée commandée par un algorithme pour une opération allumage-injection

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Abstract (en)
The present invention provides an injector-ignition fuel injection system for an internal combustion engine, comprising an ECU controlling a heated catalyzed fuel injector for heating and catalyzing a next fuel charge, wherein the ECU uses a one firing cycle look-ahead algorithm for controlling fuel injection. The ECU may further incorporate a look-up table, auto- tuning functions and heuristics to compensate for the rapid rotational de-acceleration that occurs near top dead center in lightweight small ultra-high compression engines as may be used with this invention. The ECU may further ramp heat input to the injector in response to engine acceleration requests and, under such circumstances, may extend its look-ahead for up to four firing cycles.

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Cited by
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